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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,407	03/01/2002	Carol L. Thompson	10001153	6225

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EXAMINER
INGBERG, TODD D

ART UNIT	PAPER NUMBER
2193	

DATE MAILED: 07/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)
Office Action Summary		10/087,407	THOMPSON ET AL.
		Examiner	Art Unit	
		Todd Ingberg	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). ·
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>07 April 2006</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-20</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>3/1/2002</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claims 1 – 20 have been examined.

Claims 6 and 16 have been amended.

Specification

1. The new abstract has been entered.

2. The new title has been entered.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1 – 10 and 16 - 20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The current focus of the Patent Office in regard to statutory inventions under 35 U.S.C. § 101 for method claims and claims that recite a judicial exception (software) is that the claimed invention recite a practical application. Practical application can be provided by a physical transformation or a useful, concrete and tangible result. No physical transformation is recited and additionally, the final result of the claim is an optimization which is not a tangible result because the result is not stored on a computer readable medium. The following link on the World Wide Web is for the United States Patent And Trademark Office (USPTO) policy on 35 U.S.C. §101.

http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf

To no fault of applicant the rejection under 35 U.S.C. 101 has not been overcome. The

new focus of the Office is described in the link above. The result being tangibly embodied is

the focus.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6.   Claims 1, 6 and 11 rejected under 35 U.S.C. 102(b) as being anticipated by Robert

Jacob's teaching of "A State Transition Diagram Language for Visual Programming, August

1985, referred to as VP.

Claim 1
VP anticipates a method for providing a graphic representation of code characteristics, the
method comprising: acquiring a block of code in a program; analyzing the block of code for at
least one instruction characteristic; generating a unique graphical indicator for the at least one
instruction characteristic; and displaying the unique graphical indicator with the block of code to
indicate that the at least one instruction characteristic is present in the block of code.
Examiner's Response
VP anticipates a method for providing a graphic representation of code characteristics (See page
93, figure 1 and associated text), each with unique ID (Page 93, Fig 1 and each label). Block of
code (page 94, Figure 2).

Claim 6
VP anticipates a system for providing a graphic representation of code characteristics,
comprising: means for acquiring a block of code in a program; means for analyzing the block of
code for at least one instruction characteristic; means for generating a unique graphical indicator
for the at least one instruction characteristic; and means for displaying the unique graphical
indicator with the block of code to indicate that the at least one instruction characteristic is
present in the block of code.
Examiner's Response
As per claim 1.

Claim 11

VP anticipates a computer readable medium for a graphic representation of code characteristics tangibly embodied on a computer readable medium, comprising: logic for acquiring a block of code in a program; logic for analyzing the block of code for at least one instruction characteristic; logic for generating a unique graphical indicator for the at least one instruction characteristic; and logic for displaying the unique graphical indicator with the block of code to indicate that the at least one instruction characteristic is present in the block of code.
Examiner's Response
As per claim 1.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 1 – 20 are rejected under 35 U.S.C. 103(e) as being unpatentable over Robert

Jacob's teaching of "A State Transition Diagram Language for Visual Programming, August

1985, referred to as VP in view of TMS320C6X Optimizing Compiler User's Guide, Texas

Instrument 2000 (Called TI).

Claim 1

VP teaches a environment to support visual debugging and optimization but VP does not teach the underlying theory of compiler optimization. It is TI who teaches compiler optimization. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine VP and TI, because visual debuggers and optimization make development environments easier to use.

Claim 2

The method of claim 1, wherein the at least one code characteristic is selected from the group consisting of a user-visible sub-statement instruction, a loop entry instruction, a loop body instruction, dead code instruction, and a data-speculative load instruction.
Examiner's Response
TI teaches at least one a data-speculative load instruction (TI, pages 3-4, 3-4 to 3-11 and Appendix A, pipelining)

Claim 3
The method of claim 1, wherein the unique graphical indicator is selected from the group
consisting of text color, background color, a tine, an arc, a box and a tag.
Examiner's Response
VP, page 97, Programming a multi-window User Interface. Simulator is the debugger
environment and appearance in Figure 7

Claim 4
The method of claim 1, wherein the displaying the unique graphical indicator step further
comprises: indicating if the at least one instruction characteristic is a loop-carried dependency.
Examiner's Response
Ti, page 3-13

Claim 5
The method of claim 1, wherein the displaying the unique graphical indicator step further
comprises: indicating if the at least one instruction characteristic is a data-speculative load
instruction with at least one possible conflicting store.
Examiner's Response
instruction (TI, pages 3-4, 3-4 to 3-11 and Appendix A, pipelining)

Claim 7
The system of claim 6, wherein the at least one code characteristic is selected from the group
consisting of a user-visible sub-statement instruction, a loop entry instruction, a loop body
instruction, dead code instruction, and a data-speculative load instruction.
Examiner's Response
As per claim 2.

Claim 8
The system of claim 6, wherein the unique graphical indicator is selected from the group
consisting of text color, background color, a line, an arc, a box and a tag.
Examiner's Response
As per claim 3.

Claim 9
The system of claim 6, wherein the displaying means further comprises: means for indicating if
the at least one instruction characteristic is a loop-carried dependency.
Examiner's Response
As per claim 4.

Claim 10
The system of claim.. 6, wherein the displaying means further comprises: means for indicating if
the at least one instruction characteristic is a data speculative load instruction with al: least one
possible conflicting store.
Examiner's Response

As per claim 2.

Claim 12
The computer readable medium of claim 11, wherein the at least one code characteristic is selected from the group consisting of a user-visible sub-statement instruction, a loop entry instruction, a loop body instruction, dead code instruction, and a data-speculative load instruction.
Examiner's Response
As per claim 2.

Claim 13
The computer readable medium of claim 11, wherein the unique graphical indicator is selected from the group consisting of text color, background color, a line, an arc, a box and a tag.
Examiner's Response
As per claim 3.

Claim 14
The computer readable medium of claim 11, wherein the displaying logic further comprises: logic for indicating if the at least one instruction characteristic is a loop-carried dependency.
Examiner's Response
As per claim 4.

Claim 15
The computer readable medium of claim 11, wherein the displaying logic further comprises:
        logic for indicating if the at least one instruction characteristic is a data
speculative load instruction with ad least one possible conflicting store.
Examiner's Response
As per claim 5.

Claim 16
VP teaches a system for providing a graphic representation of code characteristics tangibly embodied on a computer readable medium, comprising:
        a debug tool that indicates instruction characteristics in a program, wherein the debug tool further comprises:
                logic for acquiring a block of code in the program;
                logic for analyzing the block of code for the at least one instruction characteristic;
                logic for generating a unique graphical indicator for the at least one instruction characteristic; and
                logic for displaying the unique graphical indicator with the block of code to indicate that the at least one instruction characteristic is present in the block of code.
Examiner's Response
As per claim 1 and TI page 3-29.

Claim 17

The system of claim 16, wherein the at least one code characteristic is selected from the group consisting of a user-visible sub-statement instruction, a loop entry instruction, a loop body instruction, dead code instruction, and a data-speculative load instruction.
Examiner's Response
As per claim 2.

Claim 18

The system of claim 16, wherein the unique graphical indicator is selected from the group consisting of text color, background color. a line, an arc, a box and a tag.
Examiner's Response
As per claim 3.

Claim 19

The system of claim 16, wherein the displaying logic further comprises: logic for indicating if the a: least one instruction characteristic is a loop-carried dependency.
Examiner's Response
As per claim 4.

Claim 20

The system of claim 16, wherein the displaying logic further comprises: logic for indicating if the at least one instruction characteristic is a data speculative load instruction with at least one possible conflicting store.
Examiner's Response
As per claim 5.

Response to Arguments

9.   Applicant's arguments with respect to claims 1 – 20 have been considered but are moot in

view of the new ground(s) of rejection. VP is more than just a programming environment. The

simulator serves as a debugger and the multiple windows provide text views and diagrams

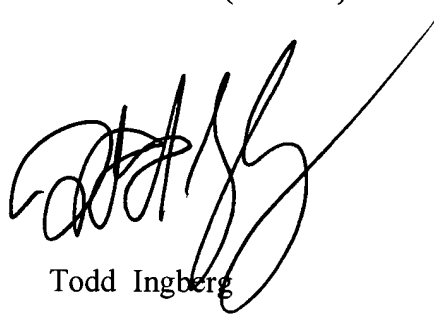related to the text.

Correspondence

10.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Todd Ingberg whose telephone number is (571) 272-3723. The examiner can normally be reached on during the work week..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Todd Ingberg

Primary Examiner

Art Unit 2124

TI